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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,167	07/11/2001	Kenichiro Suetsugu	43888-112	7945
20277	7590	06/24/2004	EXAMINER	
MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096			PHAN, THIEM D	
			ART UNIT	PAPER NUMBER
			3729	
DATE MAILED: 06/24/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/889,167	SUETSUGU ET AL.	
	Examiner	Art Unit	
	Tim Phan	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 & 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed in 3/31/04 has been fully considered and made of record.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9, 10 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Asao et al (JP07-326834) hereinafter '834.

As applied to claims 9 and 10, the '834 teaches a method of recycling printed circuit board by reading and displaying the codes on the printed circuit board (Cf. Patent Abstracts of Japan, Purpose, lines 4-6) that indicates presence or absence of lead (Pb) (Cf. Detailed Description, Paragraph 8, lines 4-6), comprising:

- identifying various wastes on the articles through the displayed bar code with “absolute magnitude” classification (Cf. Detailed Description, Paragraph 7, line 1; Paragraph 8, line 2) and,

- individually separating parts having “absolute magnitude” of the heavy metal such as lead (Cf. Detailed Description, Paragraph 8, line 4) or “absolute magnitude” 0 which is judged as the level of free lead to be used to fill or reclaim land (Cf. Detailed Description, Paragraph 8, lines 5 and 6).

As applied to claim 15, the ‘834 teaches that the identification information is the bar code 2, which is well known to have two displayed informations of bar mode and numerical mode underneath and identifiable by a human, with recognizable “absolute magnitude” markings from 0 to 5 (Cf. Detailed Description, Paragraph 8; Paragraph 9, Table 1).

As applied to claim 16, the ‘834 teaches that the lead containing article is recycled for recovery (Cf. Detailed Description, Paragraph 5, lines 1-4) instead of being released into the environment.

As applied to claims 17-20, the ‘834 teaches that the lead free article with soldered parts such as a populated circuit board marked with “absolute magnitude 0” is disposed in a dumping ground or land reclaim (Cf. Detailed Description, Paragraph 8, line 6).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '834.

As applied to claims 1-5, the '834 teaches an article or printed circuit board imprinted with a bar code 2 (Cf. Detailed Description, Paragraph 8, line 1) that identifies an absolute magnitude number (Cf. Detailed Description, Paragraph 9, Table 1) from 5 (heavily lead doped) to 0 which is judged to be lead free for land burying (Cf. Detailed Description, Paragraph 8, line 6).

It would be obvious to one of ordinary skill in the art at the time the invention was made to recognize that an article such as a populated printed circuit board marked with an absolute magnitude number 0 is made of lead free electrodes, lead free coating and lead free solders and lead free components onboard.

As applied to claims 6 and 7, the '834 teaches a bar code (Cf. Detailed Description, Paragraph 8, line 1) imprinted on the printed circuit board, except for detailing the soldered parts, the type of solder and material used onboard.

It would be obvious to one of ordinary skill in the art at the time the invention was made to detail the soldered parts, the type of solder and material used onboard since it was known in the art that the bar code carries information about different level of lead through the absolute

magnitude number 0 to 5 (Cf. Detailed Description, Paragraph 8, lines 4-6; Paragraph 9, Table 1) and the code no. 8 which shows all parts currently used (Cf. Detailed Description, Paragraph 19, lines 7-10).

As applied to claim 8, the '834 teaches a bar code (Cf. Detailed Description, Paragraph 8, line 1) imprinted on the printed circuit board, except for having the bar code or identification information imprinted on the housing which accommodates the printed circuit board or article.

It would be obvious to one of ordinary skill in the art at the time the invention was made to have the bar code or identification information imprinted on the housing which accommodates the printed circuit board or article, since it was known in the art that having an imprinted information on an item for different level of lead onboard or for presence or absence of lead in the housing is needed for recovery or recycling (Cf. Detailed Description, Paragraph 8, lines 4-6; Paragraph 9, Table 1).

As applied to claim 14, the '834 teaches that the identification information is the bar code 2 with recognizable "absolute magnitude" markings from 0 to 5 (Cf. Detailed Description, Paragraph 8; Paragraph 9, Table 1) and it is well known and obvious to one of ordinary skill in the art to recognize that any bar-code display always has a numerical sequence underneath and recognizable by a human as a back-up so that the data information can be retrieved when the bar-scanner fails.

Response to Arguments

6. Applicants' arguments filed in 3/31/04 have been fully considered but they are not persuasive for the following reasons:

Applicants recite *inter alia* "...Asao does NOT refer to lead content *specifically*....Asao does not differentiate between lead and other types of heavy metals." (Cf. Remarks, Paragraph 2). The Patent Office's position, as stated in the preceding Action, was and continues to be that since the '834 teaches that the heavy metal includes lead (i.e. Pb) (Cf. Detailed Description, Paragraph 8, line 4), its presence or absence in the products is recorded during recycling (Cf. Detailed Description, Paragraph 8, lines 2-4).

The '834 indeed teaches that lead (i.e. Pb) does harm to the environment (Cf. Detailed Description, Paragraph 8, lines 4 & 5).

Applicants urge that a bar code carried on an article is not recognizable to a human. The Patent Office retorts. It is well known and obvious to one of ordinary skill in the art to recognize that any bar-code display always has a numerical display underneath and recognizable by a human as a back-up so that the data information can be retrieved when the bar-scanner fails.

7. Each of Claims 1-10 and 14-20 stand rejected as carefully articulated in the previous and current Office Action and in Responses to Remarks provided hereinabove.

Furthermore the Office saith not.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 703-605-0707. The examiner can normally be reached on Monday - Friday, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter VO can be reached on 703-308-1789. The fax phone number for the


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organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



Tim Phan
Examiner
Art Unit 3729


CARL J. ARBES
PRIMARY EXAMINER

tp
June 22, 2004